DOCUMENT RESUME

ED 238 447 IR 050 566

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TITLE	Library Use by Graduate Students and Faculty in Science and Technology Areas. RB-83-4.
INSTITUTION	Texas Univ., Austin. Measurement and Evaluation Center.
PUB DATE	Aug 83
NOTE	80p.; For related document, see IR 050 567.
PUB TYPE	Reports - Research/Technical (143) -- Tests/Evaluation Instruments (160)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	*College Libraries; Engineering; Higher Education; *Information Needs; Library Research; *Library Services; Library Surveys; Natural Sciences; Nursing; Pharmacy; Questionnaires; Research Libraries; Use Studies
IDENTIFIERS	*Library Users; *University of Texas Austin; User Needs

ABSTRACT

A mail survey of 1,682 graduate students and 758 faculty in the Colleges of Natural Science, Engineering, and Pharmacy, and in the School of Nursing at the University of Texas at Austin was conducted during February 1983 to ascertain the characteristics of the science and technology libraries user population, the type and frequency of library use, and future library needs. A total of 732 surveys were returned (30% response rate). It was found that (1) the majority of students and faculty used the libraries at least one to three times per week; (2) the primary reasons for using the libraries were to obtain information for research and to check out books; and (3) over half of the faculty and almost two-thirds of the students obtained over 40% of the materials needed for their courses/research from the libraries. This publication describes survey methodology and results, with tables showing responses to each survey item. Other results reported are concerned with specific libraries used most often; recommendation of library acquisitions; amount and type of library use required of students; need for student instruction in library skills; and use of interlibrary loan services, library audiovisual media, and computer-based literature searching services. A sample questionnaire is also provided. (Author/ESR)

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LIBRARY USE BY GRADUATE STUDENTS AND FACULTY IN SCIENCE AND TECHNOLOGY AREAS

Barbara Lawrence, Linda T. Curran,
and Carole K. Holahan

RB-83-4 August 1983

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LIBRARY USE BY GRADUATE STUDENTS AND FACULTY IN SCIENCE AND TECHNOLOGY AREAS

Barbara Lawrence, Linda T. Curran, and Carole K. Holahan

In the fall of 1982, Virginia Phillips, Assistant Director of Branch Services, contacted Dr. Carole K. Holahan, Associate Director of the Measurement and Evaluation Center (MEC), concerning a prospective library survey at The University of Texas at Austin. The libraries requested MEC technical assistance in the development and analysis of a survey of graduate students and faculty in the Colleges of Natural Science, Engineering, Pharmacy, and in the School of Nursing. The information was needed for planning in the five science and technology libraries. Specifically, the survey was conducted to ascertain the characteristics of the user population, type of use, frequency of use, and future needs. This survey was planned to supplement information obtained in a concurrent on-site survey of library use of the five science and technology libraries (see MEC report, Curran and Holahan, 1983).[1] After the final version was agreed upon, the survey was administered by mail. The data were then summarized by the Measurement and Evaluation Center and are presented in this report. Barbara Lawrence and Linda T. Curran were the MEC Research Associates involved in the project.

Method

Survey. The Science Libraries Survey contained 45 items (see Appendix). Respondents were asked to indicate their rank, department of enrollment

[1] Curran, L. T., and Holahan, C.K. (1983). Library use in the science and technology libraries spring semester 1983. (Research Bulletin RB-83-2). Austin: The University of Texas at Austin, Measurement and Evaluation Center.

or appointment, and why they were using the library. Also, respondents were asked how frequently and at what time they use the library and whether they use the library themselves or send someone else. Respondents were asked to identify the libraries used most often, next most often, and third most often. In addition, the respondents were asked how much of their course material was obtained from the library, whether they used audiovisual aids in their courses, and whether their students were required to make use of library materials (i.e., encyclopedias, card catalogs). The respondents were also asked--in the last year--how many new books or journals they recommended to the library for purchase, whether or not they had used NTIS (National Technical Information Service) reports, and how many inter-library loans they had requested. Finally, the respondents were asked whether they requested computer-based literature searches in the last year, whether they were satisfied with the results, and their reasons if not satisfied.

Administration of survey. During February 1983, the Science Libraries Survey was mailed to 758 faculty and 1,682 graduate students who were in the Colleges of Engineering, Natural Science, and Pharmacy, and in the School of Nursing. The respondents were requested to return completed surveys in enclosed envelopes by March 6, 1983.

Description of the sample. Of the 2,440 surveys mailed out, 732 (30.0%) were returned. For the faculty, 325 surveys (42.9%) were returned; for the graduate students, 394 surveys (23.4%) were returned; and 13 respondents indicated they were in the "other" category and did not belong in any of the faculty or student categories. Of the 325 faculty members who responded, 134 (41.2%) were full professors, 65 (20.0%) were associate professors, 83 (25.5%) were assistant professors, 19 (5.8%) were instructors, and 24 (7.4%)

were lecturers. Of the 394 graduate students who responded, 254 (64.5%) were doctoral degree students and 140 (35.5%) were master's degree students.

The respondents were asked to indicate their department (see Table 1). Seven faculty members and 10 graduate students reported affiliation with more than one department and are not included in this table. The only department not represented by any faculty member was astronomy. Graduate students were represented in every department, although in some departments the representation was minimal. Professors were most heavily represented in physics (12.5%) and civil engineering (10.2%). The highest percentages of associate professors were in chemistry (14.1%), nursing (10.9%), and pharmacy (10.9%). The highest percentages of assistant professors were in nursing (14.8%) and home economics (11.1%). Almost half the instructors were in nursing, and the highest percentages of lecturers were found in electrical engineering (16.7%) and zoology (16.7%). Doctoral students were concentrated in civil engineering (16.9%) and nursing (11.8%). Overall, the largest percentage of the total group of faculty and graduate students (13.8%) was in nursing.

Results

Tables 1-42 present the frequencies of the responses to the items on the survey. The frequencies of the responses to Items 2-45 were tabulated for each of the classifications listed in Item 1, which included professor, associate professor, assistant professor, instructor, lecturer, doctoral student, master's student, and "other." The frequencies were also tabulated for the total faculty and the total graduate students. The percentages in the tables are column percentages and represent the proportion of respondents in a particular classification that chose a certain response.

Frequency of use. The majority of the students and the faculty use the library at least 1-3 times per week (see Table 2). The only exceptions

Table 1

Items 2 - 4. Classification

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Master's	Total Grad.	Other
Aerospace Engineering & Engineering Mechanics	9 7.0%	0 0.0%	1 1.2%	0 0.0%	2 8.3%	12 3.8%	14 5.7%	6 4.4%	20 5.2%	0 0.0%
Architectural Engineering	0 0.0%	2 3.1%	0 0.0%	0 0.0%	2 8.3%	4 1.3%	0 0.0%	3 2.2%	3 0.8%	0 0.0%
Astronomy	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	4 1.6%	0 0.0%	4 1.0%	1 7.7%
Biomedical Engineering	1 0.8%	1 1.6%	1 1.2%	0 0.0%	0 0.0%	3 0.9%	0 0.0%	3 2.2%	3 0.8%	0 0.0%
Botany	5 3.9%	2 3.1%	2 2.5%	0 0.0%	0 0.0%	9 2.8%	9 3.7%	1 0.7%	10 2.6%	0 0.0%
Chemical Engineering	6 4.7%	1 1.6%	3 3.7%	0 0.0%	1 4.2%	11 3.5%	13 5.3%	4 2.9%	17 4.5%	0 0.0%
Chemistry	12 9.4%	9 14.1%	4 4.9%	0 0.0%	1 4.2%	26 8.2%	26 10.6%	2 1.5%	28 7.3%	2 15.4%
Civil Engineering	13 10.2%	6 9.4%	5 6.2%	0 0.0%	1 4.2%	25 7.9%	19 7.8%	23 16.9%	42 11.0%	0 0.0%
Computer Sciences	0 0.0%	1 1.6%	3 3.7%	0 0.0%	1 4.2%	5 1.6%	11 4.5%	6 4.4%	17 4.5%	1 7.7%
Electrical Engineering	5 3.9%	3 4.7%	3 3.7%	0 0.0%	4 16.7%	15 4.7%	12 4.9%	13 9.6%	25 6.6%	0 0.0%
Geological Sciences	12 9.4%	4 6.3%	5 6.2%	1 5.3%	1 4.2%	23 7.3%	8 3.3%	10 7.4%	18 4.7%	0 0.0%
Home Economics	4 3.1%	5 7.8%	9 11.1%	3 15.8%	3 12.5%	24 7.6%	2 0.8%	6 4.4%	8 2.1%	2 15.4%

(continued)

Table 1 (continued)

Items 2-4. Classification

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Master's	Total Grad.	Other
Marine Studies	0 0.0%	1 1.6%	3 3.7%	0 0.0%	0 0.0%	4 1.3%	0 0.0%	1 0.7%	1 0.3%	1 7.7%
Mathematics	9 7.0%	4 6.3%	6 7.4%	3 15.8%	0 0.0%	22 7.0%	9 3.7%	2 1.5%	11 2.9%	0 0.0%
Mechanical Engineering	6 4.7%	1 1.6%	7 8.6%	1 5.3%	2 8.3%	17 5.4%	8 3.3%	13 9.6%	21 5.5%	2 15.4%
Microbiology	6 4.7%	3 4.7%	3 3.7%	0 0.0%	0 0.0%	12 3.8%	7 2.9%	2 1.5%	9 2.4%	1 7.7%
Nursing	2 1.6%	7 10.9%	12 14.8%	9 47.4%	0 0.0%	30 9.5%	50 20.4%	16 11.8%	66 17.3%	2 15.4%
Petroleum Engineering	4 3.1%	2 3.1%	1 1.2%	0 0.0%	0 0.0%	7 2.2%	3 1.2%	9 6.6%	12 3.1%	1 7.7%
Pharmacy	5 3.9%	7 10.9%	8 9.9%	2 10.5%	0 0.0%	22 7.0%	14 5.7%	6 4.4%	20 5.2%	0 0.0%
Physics	16 12.5%	1 1.6%	4 4.9%	0 0.0%	2 8.3%	23 7.3%	22 9.0%	6 4.4%	28 7.3%	0 0.0%
Zoology	12 9.4%	3 4.7%	1 1.2%	0 0.0%	4 16.7%	20 6.3%	13 5.3%	2 1.5%	15 3.9%	0 0.0%
Other	1 0.8%	1 1.6%	0 0.0%	0 0.0%	0 0.0%	2 0.6%	1 0.4%	2 1.5%	3 0.8%	0 0.0%
Total	128 100.1%*	64 100.3%*	81 99.8%*	19 100.4%*	24 100.1%*	316 99.8%*	245 100.1%*	136 100.1%*	381 99.8%*	13 100.1%*

*This figure differs from 100% only because of rounding error.

Table 2

Item 5. How frequently do you use a library or libraries at The University of Texas at Austin?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Master's	Total Grad.	Other
Daily	6 4.5%	4 6.3%	5 6.2%	0 0.0%	2 8.3%	17 5.3%	27 10.7%	22 15.7%	49 12.5%	2 15.4%
4 - 6 times per week	18 13.5%	7 11.1%	9 11.1%	1 5.3%	1 4.2%	36 11.2%	48 19.0%	24 17.1%	72 18.4%	0 0.0%
1 - 3 times per week	65 48.9%	33 52.4%	34 42.0%	8 42.1%	11 45.8%	151 47.2%	131 52.0%	63 45.0%	194 49.5%	3 23.1%
1 - 2 times per month	35 26.3%	15 23.8%	27 33.3%	6 31.6%	9 37.5%	92 28.8%	36 14.3%	25 17.9%	61 15.6%	5 38.5%
Once a semester or less	8 6.0%	4 6.3%	5 6.2%	3 15.8%	1 4.2%	21 6.6%	10 4.0%	4 2.9%	14 3.6%	3 23.1%
Not necessary to my research	1 0.8%	0 0.0%	1 1.2%	1 5.3%	0 0.0%	3 0.9%	0 0.0%	2 1.4%	2 0.5%	0 0.0%
Total	133 100.0%	63 99.9%*	81 100.0%	19 100.1%*	24 100.0%	320 100.0%	252 100.0%	140 100.0%	392 100.1%*	13 100.1%*

*This figure differs from 100% only because of rounding error.

were the instructors and the "others." Only 47.4% of the instructors and 38.5% of the "others" use the library at least weekly (1-3 times per week, 4-6 times per week, or daily). Among the faculty, the associate professors had the highest percentage of weekly users (69.8%); among the students, the doctoral students had the highest percentage of weekly users (81.7%). Overall, roughly 80% of the students use the library weekly, while only a little over 60% of the faculty use it weekly. Very few persons in any classification indicated that library use was not necessary to their research.

Libraries used most often. Respondents were asked which library they use most often (see Table 3). The faculty indicated they used the Engineering (22.8%) and the Science (20.8%) libraries the most often. The students use the Engineering (25.5%) and the Perry-Castañeda (24.9%) libraries the most often. Within the faculty classifications, the Engineering library is used most by the professors (27.6%) and the lecturers (33.3%). A substantial percentage of the instructors (47.1%) preferred the Perry-Castañeda library. The Science (23.5%), Perry-Castañeda (21.0%), and Engineering (21.0%) libraries are preferred by the assistant professors. The Science (20.6%) and Chemistry (19.0%) libraries are used most by the associate professors. Within the student classifications, the Engineering library is used most by the master's students (39.6%), while the Perry-Castañeda library is favored by the doctoral students (28.0%).

For the library used next most frequently (see Table 4), the highest percentage of the total faculty, the total students, and all of the classifications except the associate professors and the "others" used the Perry-Castañeda library next most frequently. The Science library is preferred next by the associate professors (30.0%) and the "others" (33.3%).

Table 3

Item 6. Which library or libraries do you use most often?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Master's	Total Grad.	Other
Architecture	1 0.8%	1 1.6%	1 1.2%	1 5.9%	2 8.3%	6 1.9%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Chemistry	20 15.7%	12 19.0%	8 9.9%	0 0.0%	2 8.3%	42 13.5%	40 16.5%	11 8.2%	51 13.5%	1 8.3%
Engineering	35 27.6%	11 17.5%	17 21.0%	0 0.0%	8 33.3%	71 22.8%	43 17.7%	53 39.6%	96 25.5%	1 8.3%
Geology	9 7.1%	4 6.3%	5 6.2%	1 5.9%	1 4.2%	20 6.4%	8 3.3%	12 9.0%	20 5.3%	0 0.0%
Perry-Castañeda	5 3.9%	10 15.9%	17 21.0%	8 47.1%	3 12.5%	43 13.8%	68 28.0%	26 19.4%	94 24.9%	4 33.3%
Physics-Math-Astronomy	29 22.8%	9 14.3%	13 16.0%	3 17.6%	3 12.5%	57 18.3%	40 16.5%	12 9.0%	52 13.8%	0 0.0%
Science	26 20.5%	13 20.6%	19 23.5%	2 11.8%	5 20.8%	65 20.8%	40 16.5%	15 11.2%	55 14.6%	3 25.0%
Undergraduate	0 0.0%	1 1.6%	0 0.0%	0 0.0%	0 0.0%	1 0.3%	1 0.4%	1 0.7%	2 0.5%	0 0.0%
Other	2 1.6%	2 3.2%	1 1.2%	2 11.8%	0 0.0%	7 2.2%	3 1.2%	4 3.0%	7 1.9%	3 25.0%
Total	127 100.0%	63 100.0%	81 100.0%	17 100.1%*	24 99.9%*	312 100.0%	243 100.1%*	134 100.1%*	377 100.0%	12 99.9%*

*This figure differs from 100% only because of rounding error.

Table 4

Item 7. Which library do you use next most often?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Architecture	0 0.0%	0 0.0%	0 0.0%	0 0.0%	2 8.7%	2 0.7%	1 0.4%	2 1.5%	3 0.8%	0 0.0%
Chemistry	19 15.3%	8 13.3%	14 17.5%	0 0.0%	3 13.0%	44 14.7%	25 10.8%	5 3.8%	30 8.3%	3 25.0%
Engineering	20 16.1%	6 10.0%	12 15.0%	0 0.0%	4 17.4%	42 14.0%	29 12.5%	23 17.7%	52 14.4%	1 8.3%
Geology	8 6.5%	3 5.0%	3 3.7%	0 0.0%	2 8.7%	16 5.3%	7 3.0%	6 4.6%	13 3.6%	0 0.0%
Perry-Castañeda	32 25.8%	12 20.0%	16 20.0%	6 46.2%	5 21.7%	71 23.7%	55 23.7%	48 36.9%	103 28.5%	1 8.3%
Physics-Math-Astronomy	19 15.3%	6 10.0%	8 10.0%	0 0.0%	1 4.3%	34 11.3%	36 15.5%	17 13.1%	53 14.6%	2 16.7%
Science	16 12.9%	18 30.0%	12 15.0%	3 23.1%	2 8.7%	51 17.0%	41 17.7%	13 10.0%	54 14.9%	4 33.3%
Undergraduate	7 5.6%	5 8.3%	13 16.2%	2 15.4%	2 8.7%	29 9.7%	25 10.8%	11 8.5%	36 9.9%	0 0.0%
Other	3 2.4%	2 3.3%	2 2.5%	2 15.4%	2 8.7%	11 3.7%	13 5.6%	5 3.8%	18 5.0%	1 8.3%
Total	124 99.9%*	60 99.9%*	80 99.9%*	13 100.1%*	23 99.9%*	300 100.1%*	232 100.0%	130 99.9%*	362 100.0%	12 99.9%*

*This figure differs from 100% only because of rounding error.

For the library used third most often (see Table 5), the Perry-Castañeda library is again preferred by the majority of the respondents. Only the instructors and the "others" prefer a different library. The instructors use the Undergraduate library (40.0%) and another library than the ones listed (40.0%) third most often. Half of the "others" favor the Undergraduate library.

Reasons for using the library. Respondents were asked to indicate why they use the library. At least 60% in each classification use the library to examine new books or journals (see Table 6). Among the faculty, the professors had the highest percentage (94.0%) and the instructors had the lowest percentage (66.7%) examining new books or journals. Among the students, the doctoral students (84.3%) examine new books or journals more than the master's students (73.9%). The "others" had the lowest percentage (61.5%) of all the classifications using the library to examine new books or journals.

Again, the majority of the users in each classification use the library to check out books (see Table 7). The "others" (61.5%) and the instructors (77.8%) had the lowest percentages checking out books. Over 90% in the remaining classifications use the library to check out books.

In all but one classification, more than half of the respondents use the library to photocopy materials (see Table 8). The heaviest users of the photocopying machines are the doctoral students (83.4%) and the master's students (90.0%). Comparatively, a little less than 65% of the faculty use the photocopying machines, with the instructors (38.9%) and the lecturers (54.2%) being the lightest users.

From Table 9 it can be seen that the computer-based information services are used by the faculty (42.0%) more than the students (31.3%) and the "others" (23.1%). Among the faculty, the assistant professors (46.3%) use the computer-based information services the most, while the instructors (27.8%)

Table 5

Item 8. Which library do you use third most often?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Architecture	2 1.8%	1 2.0%	1 1.7%	0 0.0%	1 5.9%	5 2.0%	4 1.9%	2 1.9%	6 1.9%	0 0.0%
Chemistry	10 9.2%	3 5.9%	4 6.7%	0 0.0%	2 11.8%	19 7.7%	15 7.1%	6 5.6%	21 6.6%	1 8.3%
Engineering	13 11.9%	9 17.6%	7 11.7%	0 0.0%	2 11.8%	31 12.6%	22 10.4%	13 12.0%	35 10.9%	1 8.3%
Geology	6 5.5%	1 2.0%	4 6.7%	0 0.0%	1 5.9%	12 4.9%	5 2.4%	2 1.9%	7 2.2%	1 8.3%
Perry-Castañeda	40 36.7%	17 33.3%	14 23.3%	0 0.0%	3 17.6%	74 30.0%	51 24.1%	30 27.8%	81 25.3%	2 16.7%
Physics-Math-Astronomy	9 8.3%	4 7.8%	13 21.7%	1 10.0%	3 17.6%	30 12.1%	16 7.5%	10 9.3%	26 8.1%	0 0.0%
Science	11 10.1%	5 9.8%	5 8.3%	1 10.0%	1 5.9%	23 9.3%	22 10.4%	7 6.5%	29 9.1%	0 0.0%
Undergraduate	10 9.2%	7 13.7%	3 5.0%	4 40.0%	2 11.8%	26 10.5%	43 20.3%	29 26.9%	72 22.5%	6 50.0%
Other	8 7.3%	4 7.8%	9 15.0%	4 40.0%	2 11.8%	27 10.9%	34 16.0%	9 8.3%	43 13.4%	1 8.3%
Total	109 100.0%	51 99.9%*	60 100.1%*	10 100.0%	17 100.1%*	247 100.0%	212 100.1%*	108 100.2%*	320 100.0%	12 99.9%*

*This figure differs from 100% only because of rounding error.

Table 6

Item 9. Do you use the library to examine new books or journals?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Master's	Total Grad.	Other
Yes	125 94.0%	57 87.7%	74 89.2%	12 66.7%	19 79.2%	287 88.9%	214 84.3%	102 73.9%	316 80.6%	8 61.5%
No	8 6.0%	8 12.3%	9 10.8%	6 33.3%	5 20.8%	36 11.1%	40 15.7%	36 26.1%	76 19.4%	5 38.5%
Total	133 100.0%	65 100.0%	83 100.0%	18 100.0%	24 100.0%	323 100.0%	254 100.0%	138 100.0%	392 100.0%	13 100.0%

Table 7

Item 10. Do you use the library to check out books?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Master's	Total Grad.	Other
Yes	128 95.5%	64 98.5%	80 96.4%	14 77.8%	23 95.8%	309 95.4%	244 96.4%	130 94.2%	374 95.7%	8 61.5%
No	6 4.5%	1 1.5%	3 3.6%	4 22.2%	1 4.2%	15 4.6%	9 3.6%	8 5.8%	17 4.3%	5 38.5%
Total	134 100.0%	65 100.0%	83 100.0%	18 100.0%	24 100.0%	324 100.0%	253 100.0%	138 100.0%	391 100.0%	13 100.0%

Table 8

Item 11. Do you use the library to photocopy?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Yes	89 66.9%	46 71.9%	53 63.9%	7 38.9%	13 54.2%	208 64.6%	211 83.4%	126 90.0%	337 85.8%	8 61.5%
No	44 33.1%	18 28.1%	30 36.1%	11 61.1%	11 45.8%	114 35.4%	42 16.6%	14 10.0%	56 14.2%	5 38.5%
Total	133 100.0%	64 100.0%	83 100.0%	18 100.0%	24 100.0%	322 100.0%	253 100.0%	140 100.0%	393 100.0%	13 100.0%

Table 9

Item 12. Do you use the library to use computer-based information service?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Yes	54 41.5%	28 43.1%	38 46.3%	5 27.8%	9 37.5%	134 42.0%	98 38.6%	25 18.0%	123 31.3%	3 23.1%
No	76 58.5%	37 56.9%	44 53.7%	13 72.2%	15 62.5%	185 58.0%	156 61.4%	114 82.0%	270 68.7%	10 76.9%
Total	130 100.0%	65 100.0%	82 100.0%	18 100.0%	24 100.0%	319 100.0%	254 100.0%	139 100.0%	393 100.0%	13 100.0%

and the lecturers (37.5%) use these services the least. Among students, the doctoral students (38.6%) use the computer-based information services more than the master's students (18.0%).

About half of the faculty and half of the students use the library to prepare teaching/class assignments (see Table 10). Only 30% of the "others" use the library to prepare teaching/class assignments. Among the faculty, the associate professors (56.3%) had the highest percentage preparing teaching/class assignments, while the instructors (44.4%) had the lowest. The master's students (48.6%) use the library to prepare teaching/class assignments more than the doctoral students (45.6%).

Over 90% of users in all the classifications except instructors, lecturers, and "others" use the library to obtain information for research (see Table 11). Only 83.3% of both the instructors and the lecturers and 69.2% of the "others" use the library to obtain information for research.

For the item regarding the use of reserve materials (see Table 12), over 65% of the students use the reserve materials. Less than 45% of the faculty use the reserve materials. Among the faculty, the associate professors had the highest percentage (49.2%) using the reserve materials. Among the students, the master's students (73.6%) use the reserve materials more than the doctoral students (62.6%).

The majority of the faculty (over 80%) are not in the library to study their own materials (see Table 13). On the other hand, over 40% of the doctoral students and close to 60% of the master's students study their own materials in the library.

Table 14 presents the responses to Item 17, which asks whether the respondents are in the library to consult the librarian. The results indicate that the faculty with the higher rank consult the librarian more often.

Table 10

Item 13. Do you use the library to prepare teaching/class assignment?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Yes	66 50.4%	36 56.3%	39 47.0%	8 44.4%	11 45.8%	160 50.0%	115 45.6%	67 48.6%	182 46.7%	4 30.8%
No	65 49.6%	28 43.8%	44 53.0%	10 55.6%	13 54.2%	160 50.0%	137 54.4%	71 51.4%	208 53.3%	9 69.2%
Total	131 100.0%	64 100.0%	83 100.0%	18 100.0%	24 100.0%	320 100.0%	252 100.0%	138 100.0%	390 100.0%	13 100.0%

Table 11

Item 14. Do you use the library to obtain information for research?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Yes	133 99.3%	64 98.5%	79 95.2%	15 83.3%	20 83.3%	311 96.0%	243 96.4%	129 93.5%	372 95.4%	9 69.2%
No	1 0.7%	1 1.5%	4 4.8%	3 16.7%	4 16.7%	13 4.0%	9 3.6%	9 6.5%	18 4.6%	4 30.8%
Total	134 100.0%	65 100.0%	83 100.0%	18 100.0%	24 100.0%	324 100.0%	252 100.0%	138 100.0%	390 100.0%	13 100.0%

Table 12

Item 15. Do you use the library to use reserve materials?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Yes	57 43.5%	32 49.2%	30 36.6%	6 33.3%	10 43.5%	135 42.3%	159 62.6%	103 73.6%	262 66.5%	4 30.8%
No	74 56.5%	33 50.8%	52 63.4%	12 66.7%	13 56.5%	184 57.7%	95 37.4%	37 26.4%	132 33.5%	9 69.2%
Total	131 100.0%	65 100.0%	82 100.0%	18 100.0%	23 100.0%	319 100.0%	254 100.0%	140 100.0%	394 100.0%	13 100.0%

Table 13

Item 16. Do you use the library to study own materials?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Yes	22 17.6%	13 20.3%	11 13.3%	1 5.6%	4 17.4%	51 16.3%	110 43.3%	81 58.3%	191 48.6%	3 23.1%
No	103 82.4%	51 79.7%	72 86.7%	17 94.4%	19 82.6%	262 83.7%	144 56.7%	58 41.7%	202 51.4%	10 76.9%
Total	125 100.0%	64 100.0%	83 100.0%	18 100.0%	23 100.0%	313 100.0%	254 100.0%	139 100.0%	393 100.0%	13 100.0%

Table 14

Item 17. Do you use the library to consult the librarian?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Master's	Total Grad.	Other
Yes	78 60.0%	36 55.4%	41 49.4%	8 44.4%	7 30.4%	170 53.3%	119 47.2%	62 44.6%	181 46.3%	3 23.1%
No	52 40.0%	29 44.6%	42 50.6%	10 55.6%	16 69.6%	149 46.7%	133 52.8%	77 55.4%	210 53.7%	10 76.9%
Total	130 100.0%	65 100.0%	83 100.0%	18 100.0%	23 100.0%	319 100.0%	252 100.0%	139 100.0%	391 100.0%	13 100.0%

A little over 40% of both the doctoral and the master's students are in the library to consult the librarian.

The majority of the students (65.7%), faculty (72.8%) and "others" (66.7%) reported that they do not use the library for any other services besides those listed as choices on the questionnaire (see Table 15).

From Table 16 it can be seen that less than 15% of the graduate students needed any National Technical Information Service (NTIS) reports last year. Less than one-fourth of the faculty needed NTIS reports. Of the faculty, the lecturers (30.4%), the professors (25.8%), and the associate professors (23.1%) requested more NTIS reports in the last year than the assistant professors (18.1%) and the instructors (16.7%).

How do you use the library? Item 20 asks the respondents to indicate whether they use the library themselves, send someone to the library for them, or both (see Table 17). Over 90% of the students use the library themselves, while slightly less than half of the faculty use it themselves. Only 4% of the faculty and less than 1% of the students use the library solely by sending someone. Approximately half of the faculty and about 6% of the students said that they sometimes use the library themselves and sometimes send someone else.

Percentage of materials needed. Table 18 presents the percentage of materials needed from the library for research/coursework/teaching. About half of the students and one-third of the faculty needed 60% or more of their materials for research/coursework/teaching from the library. Of the faculty, the associate professors had the highest proportion (37.1%) requiring 60% or more of their research/course materials from the library, while the instructors and the lecturers had the lowest (22.2% and 25.0%, respectively).

Table 15

Item 18. Do you use the library for purposes other than those listed in Items 9 - 17?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Yes	30 29.7%	18 34.0%	15 22.1%	3 20.0%	4 20.0%	70 27.2%	70 32.9%	45 36.9%	115 34.3%	4 33.3%
No	71 70.3%	35 66.0%	53 77.9%	12 80.0%	16 80.0%	187 72.8%	143 67.1%	77 63.1%	220 65.7%	8 66.7%
Total	101 100.0%	53 100.0%	68 100.0%	15 100.0%	20 100.0%	257 100.0%	213 100.0%	122 100.0%	335 100.0%	12 100.0%

Table 16

Item 19. Have you needed any National Technical Information Service (NTIS) reports in the last year?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Yes	34 25.8%	15 23.1%	15 18.1%	3 16.7%	7 30.4%	74 23.1%	33 13.1%	17 12.3%	50 12.8%	4 30.8%
No	98 74.2%	50 76.9%	68 81.9%	15 83.3%	16 69.6%	247 76.9%	219 86.9%	121 87.7%	340 87.2%	9 69.2%
Total	132 100.0%	65 100.0%	83 100.0%	18 100.0%	23 100.0%	321 100.0%	252 100.0%	138 100.0%	390 100.0%	13 100.0%

Table 17

Item 20. How do you use the library?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Use the library yourself	61 45.9%	27 41.5%	34 41.0%	15 83.3%	15 62.5%	152 47.1%	234 92.9%	132 94.3%	366 93.4%	6 46.2%
Send someone to the library	5 3.8%	5 7.7%	1 1.2%	1 5.6%	1 4.2%	13 4.0%	2 0.8%	1 0.7%	3 0.8%	1 7.7%
Both	67 50.4%	33 50.8%	48 57.8%	2 11.1%	8 33.3%	158 48.9%	16 6.3%	7 5.0%	23 5.9%	6 46.2%
Total	133 100.1%*	65 100.0%	83 100.0%	18 100.0%	24 100.0%	323 100.0%	252 100.0%	140 100.0%	392 100.1%*	13 100.1%*

*This figure differs from 100% only because of rounding error.

Table 18

Item 21. How much of the material needed in your research/coursework/teaching do you obtain from campus libraries?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Otner
0 - 20%	35 26.1%	9 14.5%	16 19.3%	10 55.6%	9 37.5%	79 24.6%	32 12.7%	28 20.0%	60 15.3%	7 58.3%
21 - 40%	29 21.6%	11 17.7%	28 33.7%	4 22.2%	5 20.8%	77 24.0%	50 19.8%	27 19.3%	77 19.6%	3 25.0%
41 - 60%	25 18.7%	19 30.6%	14 16.9%	0 0.0%	4 16.7%	62 19.3%	40 15.9%	24 17.1%	64 16.3%	1 8.3%
61 - 80%	25 18.7%	13 21.0%	14 16.9%	4 22.2%	3 12.5%	59 18.4%	59 23.4%	29 20.7%	88 22.4%	1 8.3%
81% - 100%	20 14.9%	10 16.1%	11 13.3%	0 0.0%	3 12.5%	44 13.7%	71 28.2%	32 22.9%	103 26.3%	0 0.0%
Total	134 100.0%	62 99.9%*	83 100.1%*	18 100.0%	24 100.0%	321 100.0%	252 100.0%	140 100.0%	392 99.9%*	12 99.9%*

*This figure differs from 100% only because of rounding error.

Books or journals recommended. Less than one-third of the faculty members did not recommend in the last year any new books or journals to the library as needed acquisitions (see Table 19). Slightly more than one-third recommended 1-3 new books or journals, and the remaining third recommended 4 or more titles of new books or journals. Of the faculty, the majority of the lecturers and instructors made no recommendations, while only one-fourth each of the full, associate, and assistant professors made no recommendations. Approximately 40% each of the full, associate, and assistant professors recommended 1-3 new books or journals, and over 30% of each group recommended 4 or more.

Inter-library loan requests. The respondents were asked how many inter-library loan requests they made in the last year (see Table 20). Approximately 80% of the faculty and nearly 90% of the graduate students made less than three inter-library loan requests during the last year. Of those, about 50% of the faculty and almost 70% of the students made no inter-library loan requests at all. Among the faculty, the professors (23.9%) had the highest proportion requesting four or more inter-library loans, and the instructors (11.1%) and the lecturers (13.0%) had the lowest proportion requesting four or more inter-library loans. Among the students, the doctoral students (14.0%) had a higher proportion requesting four or more inter-library loans than the master's students (3.7%).

Library materials required for student use. About half of the professors, half of the associate professors, and about 40% of the lecturers require students to use handbooks for specific factual data, formulas, etc., in the courses they teach (see Table 21). Only 31.3% of the assistant professors and 11.8% of the instructors require students to use these reference materials. Of the students, the doctoral students (36.4%) require the use of handbooks more than the master's students (24.4%).

Table 19

Item 22. How many books or journals have you recommended that the library buy in the last year?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
0	36 27.1%	17 26.2%	21 25.9%	13 72.2%	15 62.5%	102 31.8%	196 78.1%	118 85.5%	314 80.7%	9 69.2%
1 - 3	48 36.1%	25 38.5%	36 44.4%	3 16.7%	7 29.2%	119 37.1%	46 18.3%	17 12.3%	63 16.2%	2 15.4%
4 - 6	26 19.5%	9 13.8%	9 11.1%	1 5.6%	2 8.3%	47 14.6%	5 2.0%	1 0.7%	6 1.5%	2 15.4%
7 - 10	7 5.3%	5 7.7%	4 4.9%	0 0.0%	0 0.0%	16 5.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Over 10	16 12.0%	9 13.8%	11 13.6%	1 5.6%	0 0.0%	37 11.5%	4 1.6%	2 1.4%	6 1.5%	0 0.0%
Total	133 100.0%	65 100.0%	81 99.9%*	18 100.1%*	24 100.0%	321 100.0%	251 100.0%	138 99.9%*	389 99.9%*	13 100.0%

*This figure differs from 100% only because of rounding error.

Table 20

Item 23. How many inter-library loan requests have you made in the last year?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
0	59 44.0%	32 49.2%	43 51.8%	15 83.3%	15 65.2%	164 50.8%	156 62.4%	109 80.7%	265 68.8%	9 75.0%
1 - 3	43 32.1%	24 36.9%	24 28.9%	1 5.6%	5 21.7%	97 30.0%	59 23.6%	21 15.6%	80 20.8%	1 8.3%
4 - 6	21 15.7%	3 4.6%	8 9.6%	0 0.0%	2 8.7%	34 10.5%	19 7.6%	2 1.5%	21 5.5%	1 8.3%
7 - 10	4 3.0%	3 4.6%	6 7.2%	2 11.1%	0 0.0%	15 4.6%	6 2.4%	1 0.7%	7 1.8%	1 8.3%
Over 10	7 5.2%	3 4.6%	2 2.4%	0 0.0%	1 4.3%	13 4.0%	10 4.0%	2 1.5%	12 3.1%	0 0.0%
Total	134 100.0%	65 99.9%*	83 99.9%*	18 100.0%	23 99.9%*	323 99.9%*	250 100.0%	135 100.0%	385 100.0%	12 99.9%*

*This figure differs from 100% only because of rounding error.

Table 21

Item 24. In the courses you teach, do you require students to use handbooks for specific factual data, formulas, etc.?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Yes	61 48.0%	32 51.6%	25 31.3%	2 11.8%	8 42.1%	128 42.0%	36 36.4%	10 24.4%	46 32.9%	6 54.5%
No	66 52.0%	30 48.4%	55 68.8%	15 88.2%	11 57.9%	177 58.0%	63 63.6%	31 75.6%	94 67.1%	5 45.5%
Total	127 100.0%	62 100.0%	80 100.1%*	17 100.0%	19 100.0%	305 100.0%	99 100.0%	41 100.0%	140 100.0%	11 100.0%

*This figure differs fron 100% only because of rounding error.

About 40% of the faculty require students to use technical reports, standards, specifications, etc., in their courses (see Table 22). Lecturers (47.4%), professors (46.2%), and associate professors (45.2%) require more use of these reference materials from their students than the assistant professors (33.7%) and instructors (23.5%). The master's students (31.7%) require the use of technical reports more often than the doctoral students (24.0%).

Most of the faculty (82.4%) do not require students to do computerized literature searches (see Table 23). Professors (21.1%) and associate professors (21.0%) require computerized searches the most, and instructors (5.9%) require searches the least. The doctoral students (7.0%) require computerized searches more often than the master's students (2.4%).

Close to 60% of the faculty in all classifications except the lecturers require students to use indexes/abstracts to locate journal articles (see Table 24). Less than half of the lecturers require students to use these reference materials. Approximately 30% of the doctoral students and nearly 20% of the master's students require use of indexes/abstracts.

Approximately 80% of the faculty do not require students to use encyclopedias and similar sources for background/historical data (see Table 25). Professors (24.4%) had the highest proportion requiring the use of encyclopedias, while the assistant professors (6.3%) and the instructors (5.9%) had the lowest proportion. Master's students (9.8%) require use of encyclopedias less often than doctoral students (15.0%).

Item 29 asked the respondents to indicate whether their students are required to use the library card catalogs (see Table 26). About 60% each of the professors and the associate professors require students to use the library card catalogs in their courses. The instructors (47.1%) had the lowest proportion requiring card catalog use. About one-third of the

Table 22

Item 25. In the courses you teach, do you require students to use technical reports, standards, specifications, etc.?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Master's	Total Grad.	Other
Yes	60 46.2%	28 45.2%	27 33.7%	4 23.5%	9 47.4%	128 41.6%	24 24.0%	13 31.7%	37 26.2%	5 45.5%
No	70 53.8%	34 54.8%	53 66.2%	13 76.5%	10 52.6%	180 58.4%	76 76.0%	28 68.3%	104 73.8%	6 54.5%
Total	130 100.0%	62 100.0%	80 99.9%*	17 100.0%	19 100.0%	308 100.0%	100 100.0%	41 100.0%	141 100.0%	11 100.0%

*This figure differs from 100% only because of rounding error.

Table 23

Item 26. In the courses you teach, do you require students to use computerized literature search services?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Yes	27 21.1%	13 21.0%	11 13.7%	1 5.9%	2 10.5%	54 17.6%	7 7.0%	1 2.4%	8 5.7%	1 9.1%
No	101 78.9%	49 79.0%	69 86.2%	16 94.1%	17 89.5%	252 82.4%	93 93.0%	40 97.6%	133 94.3%	10 90.9%
Total	128 100.0%	62 100.0%	80 99.9%*	17 100.0%	19 100.0%	306 100.0%	100 100.0%	41 100.0%	141 100.0%	11 100.0%

*This figure differs from 100% only because of rounding error.

Table 24

Item 27. In the courses you teach, do you require students to use indexes/abstracts to locate journal articles?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Yes	82 63.6%	36 58.1%	48 60.8%	10 58.8%	9 47.4%	185 60.5%	28 28.0%	8 19.5%	36 25.5%	5 45.5%
No	47 36.4%	26 41.9%	31 39.2%	7 41.2%	10 52.6%	121 39.5%	72 72.0%	33 80.5%	105 74.5%	6 54.5%
Total	129 100.0%	62 100.0%	79 100.0%	17 100.0%	19 100.0%	306 100.0%	100 100.0%	41 100.0%	141 100.0%	11 100.0%

Table 25

Item 28. In the courses you teach, do you require students to use encyclopedias and similar sources for background/ historical data?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Yes	31 24.4%	11 17.7%	5 6.3%	1 5.9%	3 15.8%	51 16.8%	15 15.0%	4 9.8%	19 13.5%	2 18.2%
No	96 75.6%	51 82.3%	74 93.7%	16 94.1%	16 84.2%	253 83.2%	85 85.0%	37 90.2%	122 86.5%	9 81.8%
Total	127 100.0%	62 100.0%	79 100.0%	17 100.0%	19 100.0%	304 100.0%	100 100.0%	41 100.0%	141 100.0%	11 100.0%

Table 26

Item 29. In the courses you teach, do you require students to use library card catalogs?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Yes	76 59.4%	37 59.7%	44 55.0%	8 47.1%	10 52.6%	175 57.2%	32 31.7%	9 22.0%	41 28.9%	6 54.5%
No	52 40.6%	25 40.3%	36 45.0%	9 52.9%	9 47.4%	131 42.8%	69 68.3%	32 78.0%	101 71.1%	5 45.5%
Total	128 100.0%	62 100.0%	80 100.0%	17 100.0%	19 100.0%	306 100.0%	101 100.0%	41 100.0%	142 100.0%	11 100.0%

doctoral students and one-fifth of the master's students require card catalog use.

Most of the faculty (78.9%) indicated by their responses to Item 30 that they generally require some use of library research materials by their students (see Table 27). Professors (81.7%) require library research the most, and lecturers (72.2%) require library research the least. About 63% of both the doctoral and master's students require some use of library research materials.

Research skills needed. The respondents were asked whether they would like the library to help teach research skills that are needed by their students by providing an orientation tour of the library during class time (see Table 28). The master's students (48.8%), the doctoral students (31.3%), and the associate professors (27.4%) had the highest interest in the library's provision of a tour, while the instructors (11.8%) and the full professors (15.0%) were least interested. In general, the students (36.4%) were more interested in an orientation tour than the faculty (18.5%).

About 30% of the faculty and 45% of the students indicated they would like the library to provide a presentation on research techniques during class time (see Table 29). About 35% of the lecturers and 30% each of the full, associate, and assistant professors were interested in such a presentation, while only 18% of the instructors were interested. Half of the master's students and close to 42% of the doctoral students wanted the library to provide a presentation on research techniques.

Nearly half of both the faculty and the students were interested in having the library provide a demonstration of computerized literature searching (see Table 30). Of the faculty, the associate professors (61.3%) and the assistant professors (51.4%) were the most interested in a demonstration, while the instructors (23.5%) were the least interested.

Table 27

Item 30. In the courses you teach, do you require students to use: None of the responses listed in Items 24 - 29.

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Master's	Total Grad.	Other
Yes	20 18.3%	12 21.4%	16 22.2%	4 26.7%	5 27.8%	57 21.1%	40 37.7%	15 36.6%	55 37.4%	4 44.4%
No	89 81.7%	44 78.6%	56 77.8%	11 73.3%	13 72.2%	213 78.9%	66 62.3%	26 63.4%	92 62.6%	5 55.6%
Total	109 100.0%	56 100.0%	72 100.0%	15 100.0%	18 100.0%	270 100.0%	106 100.0%	41 100.0%	147 100.0%	9 100.0%

Table 28

Item 31. Would you like the library to help you in teaching the research skills needed by your students by providing an orientation tour of the library (during class time)?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Master's	Total Grad.	Other
Yes	19 15.0%	17 27.4%	13 17.6%	2 11.8%	4 23.5%	55 18.5%	31 31.3%	20 48.8%	51 36.4%	2 25.0%
No	108 85.0%	45 76.2%	61 82.4%	15 88.2%	13 76.5%	242 81.5%	68 68.7%	21 51.2%	89 63.6%	6 75.0%
Total	127 100.0%	62 100.0%	74 100.0%	17 100.0%	17 100.0%	297 100.0%	99 100.0%	41 100.0%	140 100.0%	8 100.0%

Table 29

Item 32. Would you like the library to help you in teaching the research skills needed by your students by providing a presentation by a librarian on research techniques (during class time)?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Master's	Total Grad.	Other
Yes	37 28.9%	19 30.6%	21 28.8%	3 17.6%	6 35.3%	86 29.0%	42 42.4%	21 51.2%	63 45.0%	4 50.0%
No	91 71.1%	43 69.4%	52 71.2%	14 82.4%	11 64.7%	211 71.0%	57 57.6%	20 48.8%	77 55.0%	4 50.0%
Total	128 100.0%	62 100.0%	73 100.0%	17 100.0%	17 100.0%	297 100.0%	99 100.0%	41 100.0%	140 100.0%	8 100.0%

Table 30

Item 33. Would you like the library to help you in teaching the research skills needed by your students by providing a demonstration of computerized literature searching?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Master's	Total Grad.	Other
Yes	53 42.1%	38 61.3%	37 51.4%	4 23.5%	6 35.3%	138 46.9%	51 49.5%	23 57.5%	74 51.7%	2 25.0%
No	73 57.9%	24 38.7%	35 48.6%	13 76.5%	11 64.7%	156 53.1%	52 50.5%	17 42.5%	69 48.3%	6 75.0%
Total	126 100.0%	62 100.0%	72 100.0%	17 100.0%	17 100.0%	294 100.0%	103 100.0%	40 100.0%	143 100.0%	8 100.0%

Less than 30% of the faculty and less than 40% of the students would like to consult with a librarian on planning library research assignments (see Table 31). About half of the master's students and less than 35% of the doctoral students were interested in consulting with a librarian. Of the faculty, the lecturers (37.5%) were the most interested in consulting with a librarian, and the instructors (17.6%) were the least interested.

Only 20% of the students and 10% of the faculty wanted the library to help teach research skills to their students by providing assistance other than those skills previously listed (see Table 32). The lecturers (25.0%) and the associate professors (16.0%) needed additional assistance the most; the instructors said they did not need additional assistance. About 26% of the master's students and 18% of the doctoral students needed additional assistance.

Finally, the respondents were asked whether they required no help because they already teach research skills as part of their course (see Table 33). About 30% of the faculty and 16% of the students require assistance from the library. Approximately 80% of the associate professors do not require any additional help, while only 63% of the full professors do not need help.

Audiovisual media. The respondents were asked if they use or plan to use audio tapes in connection with teaching their classes (see Table 34). Less than 20% of the faculty and about 11% of the students use or plan to use audio tapes in their classes. Of the faculty, the instructors (29.4%) make the greatest use of audio tapes, while the lecturers (4.8%) make the smallest use of these materials.

Table 31

Item 34. Would you like the library to help you in teaching the research skills needed by your students by providing consultation with a librarian on planning library research assignments?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Master's	Total Grad.	Other
Yes	33 26.6%	19 31.1%	21 29.6%	3 17.6%	6 37.5%	82 28.4%	35 34.7%	20 48.8%	55 38.7%	1 12.5%
No	91 73.4%	42 68.9%	50 70.4%	14 82.4%	10 62.5%	207 71.6%	66 65.3%	21 51.2%	87 61.3%	7 87.5%
Total	124 100.0%	61 100.0%	71 100.0%	17 100.0%	16 100.0%	289 100.0%	101 100.0%	41 100.0%	142 100.0%	8 100.0%

Table 32

Item 35. Would you like the library to help you in teaching research skills other than those listed in Items 31 - 34?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Master's	Total Grad.	Other
Yes	9 9.5%	8 16.0%	3 5.1%	0 0.0%	3 25.0%	23 10.0%	16 18.0%	10 26.3%	26 20.5%	2 28.6%
No	86 90.5%	42 84.0%	56 94.9%	14 100.0%	9 75.0%	207 90.0%	73 82.0%	28 73.7%	101 79.5%	5 71.4%
Total	95 100.0%	50 100.0%	59 100.0%	14 100.0%	12 100.0%	230 100.0%	89 100.0%	38 100.0%	127 100.0%	7 100.0%

Table 33

Item 36. Would you like the library to help you in teaching research skills? No help required; I teach research skills as part of the course.

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Master's	Total Grad.	Other
Yes	34 36.6%	11 19.6%	17 27.9%	3 23.1%	5 33.3%	70 29.4%	15 16.7%	6 15.4%	21 16.3%	4 50.0%
No	59 63.4%	45 80.4%	44 72.1%	10 76.9%	10 66.7%	168 70.6%	75 83.3%	33 84.6%	108 83.7%	4 50.0%
Total	93 100.0%	56 100.0%	61 100.0%	13 100.0%	15 100.0%	238 100.0%	90 100.0%	39 100.0%	129 100.0%	8 100.0%

Table 34

Item 37. Do you use or plan to use audio tapes in connection with teaching your classes?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Master's	Total Grad.	Other
Yes	20 15.4%	14 22.2%	15 19.0%	5 29.4%	1 4.8%	55 17.7%	11 10.6%	5 12.8%	16 11.2%	5 50.0%
No	110 84.6%	49 77.8%	64 81.0%	12 70.6%	30 95.2%	255 82.3%	93 89.4%	34 87.2%	127 88.8%	5 50.0%
Total	130 100.0%	63 100.0%	79 100.0%	17 100.0%	31 100.0%	310 100.0%	104 100.0%	39 100.0%	143 100.0%	10 100.0%

About 35% of the faculty and nearly 30% of the students use or plan to use computer programs (see Table 35). The greatest use of computer programs was indicated by the full professors (42.3%) and the associate professors (38.1%). Less than 6% of the instructors require computer programs. The master's students (33.3%) use or plan to use computer programs more than the doctoral students (27.2%).

Over half of the faculty and about 30% of the students use slides in their classes (see Table 36). Between 50% to 60% in the faculty categories use or plan to use slides. Doctoral students (32.7%) use slides more often than master's students (23.1%).

Approximately 30% of the faculty and about 20% of the students use or plan to use videotapes/videodiscs (see Table 37). The instructors (38.9%) and the associate professors (37.1%) use videotapes/videodiscs the most, while full professors (26.4%) use these materials the least. Doctoral students (21.0%) use or plan to use videotapes/videodiscs more than master's students (15.4%).

Approximately one-third of the faculty and one-fourth of the students use or plan to use audiovisual media not listed in the previous items (see Table 38). Of the faculty, more lecturers (56.3%) and instructors (43.8%) use or plan to use audiovisual media than the full professors (33.3%), the associate professors (28.6%), and the assistant professors (26.1%).

Finally, the respondents were asked if they expected the library to provide appropriate media equipment and material for students' use (see Table 39). Approximately 60% of the faculty and about 30% of the students do not expect the library to provide media equipment and materials for student use. The instructors (61.1%) and the lecturers (52.4%) were more interested than the associate professors (44.3%), the assistant professors (35.1%), and the full professors (32.0%) in having the library provide such service.

Table 35

Item 38. Do you use or plan to use computer programs in connection with teaching your classes?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Yes	55 42.3%	24 38.1%	23 29.1%	1 5.6%	7 31.8%	110 35.3%	28 27.2%	13 33.3%	41 28.9%	4 44.4%
No	75 57.7%	39 61.9%	56 70.9%	17 94.4%	15 68.2%	202 64.7%	75 72.8%	26 66.7%	101 71.1%	5 55.6%
Total	130 100.0%	63 100.0%	79 100.0%	18 100.0%	22 100.0%	312 100.0%	103 100.0%	39 100.0%	142 100.0%	9 100.0%

Table 36

Item 39. Do you use or plan to use slides in connection with teaching your classes?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Yes	75 56.8%	38 60.3%	41 51.3%	10 55.6%	14 66.7%	178 56.7%	34 32.7%	9 23.1%	43 30.1%	5 55.6%
No	57 43.2%	25 39.7%	39 48.7%	8 44.4%	7 33.3%	136 43.3%	70 67.3%	30 76.9%	100 69.9%	4 44.4%
Total	132 100.0%	63 100.0%	80 100.0%	18 100.0%	21 100.0%	314 100.0%	104 100.0%	39 100.0%	143 100.0%	9 100.0%

Table 37

Item 40. Do you use or plan to use videotapes/videodiscs in connection with teaching your classes?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total. Faculty	Doctoral	Masters	Total Grad.	Other
Yes	34 26.4%	23 37.1%	27 35.1%	7 38.9%	7 33.3%	98 31.9%	22 21.0%	6 15.4%	28 19.4%	4 44.4%
No	95 73.6%	39 62.9%	50 64.9%	11 61.1%	14 66.7%	209 68.1%	83 79.0%	33 84.6%	116 80.6%	5 55.6%
Total	129 100.0%	62 100.0%	77 100.0%	18 100.0%	21 100.0%	307 100.0%	105 100.0%	39 100.0%	144 100.0%	9 100.0%

Table 38

Item 41. Do you use or plan to use any audiovisual media other than those listed in Items 37 - 40 in connection with teaching your classes?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Yes	36 33.3%	16 28.6%	18 26.1%	7 43.8%	9 56.3%	86 32.5%	26 25.5%	10 25.6%	36 25.5%	4 44.4%
No	72 66.7%	40 71.4%	51 73.9%	9 56.3%	7 43.8%	179 67.5%	76 74.5%	29 74.4%	105 74.5%	5 55.6%
Total	108 100.0%	56 100.0%	69 100.0%	16 100.1%*	16 100.1%*	265 100.0%	102 100.0%	39 100.0%	141 100.0%	9 100.0%

*This figure differs from 100% only because of rounding error.

Table 39

Item 42. Would you expect the library to provide appropriate media equipment and material for student use?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Yes	39 32.0%	27 44.3%	26 35.1%	11 61.1%	11 52.4%	114 38.5%	108 65.1%	65 73.9%	173 68.1%	7 63.6%
No	83 68.0%	34 55.7%	48 64.9%	7 38.9%	10 47.6%	182 61.5%	58 34.9%	23 26.1%	81 31.9%	4 36.4%
Total	122 100.0%	61 100.0%	74 100.0%	18 100.0%	21 100.0%	296 100.0%	166 100.0%	88 100.0%	254 100.0%	11 100.0%

Computer-based literature searches. Approximately 45% of the faculty and one-third of the students had a computer-based literature search run within the last year (see Table 40). The associate professors (49.2%), the assistant professors (46.9%), and the full professors (46.5%) had more computer-based literature searches run in the last year than the instructors (35.3%) and the lecturers (31.8%).

The majority of the faculty (72.0%) and the students (59.7%) were satisfied with the results of their computer-based literature search runs (see Table 41). The assistant professors (89.5%) and the instructors (85.7%) were the most satisfied with their results, while the master's students (35.9%) were the least satisfied.

Almost 45% of the faculty members indicated that their dissatisfaction with computer-based literature search runs was due to the inappropriateness of the results (see Table 42). Almost 45% of the students, however, indicated other reasons than those listed as the source of their dissatisfaction.

Comments. At the end of the questionnaire, space was provided for the respondents to add any comments they wished to make. Those comments are summarized below.

Twenty people made positive comments about the libraries, the library personnel, and the library services. In general, these respondents found the library personnel to be helpful and informative and the services to be excellent.

Some of the respondents commented that they had difficulty in locating materials for which they were looking at the library. For example, five people commented about difficulties caused by journals being away at the bindery for too long and at very inopportune times. Eleven commented that reshelving of books seems to take an inordinate amount of time. Fifteen

Table 40

Item 43. Did you have a computer-based literature search run within the last year?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Master's	Total Grad.	Other
Yes	60 46.5%	31 49.2%	38 46.9%	6 35.3%	7 31.8%	142 45.5%	84 37.2%	28 23.5%	112 32.5%	3 25.0%
No	69 53.5%	32 50.8%	43 53.1%	11 64.7%	15 68.2%	170 54.5%	142 62.8%	91 76.5%	233 67.5%	9 75.0%
Total	129 100.0%	63 100.0%	81 100.0%	17 100.0%	22 100.0%	312 100.0%	226 100.0%	119 100.0%	345 100.0%	12 100.0%

Table 41

Item 44. If you had a computer-based literature search run within the last year, were you satisfied with the results?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Yes	47 71.2%	21 58.3%	34 89.5%	6 85.7%	5 50.0%	113 72.0%	69 69.0%	14 35.9%	83 59.7%	2 40.0%
No	19 28.8%	15 41.7%	4 10.5%	1 14.3%	5 50.0%	44 28.0%	31 31.0%	25 64.1%	56 40.3%	3 60.0%
Total	66 100.0%	36 100.0%	38 100.0%	7 100.0%	10 100.0%	157 100.0%	100 100.0%	39 100.0%	139 100.0%	5 100.0%

Table 42

Item 45. If you were not satisfied with the results, what was the reason?

Response	Prof.	Assoc. Prof.	Asst. Prof.	Inst.	Lecturer	Total Faculty	Doctoral	Masters	Total Grad.	Other
Cost	6 25.0%	2 12.5%	1 14.3%	1 25.0%	2 50.0%	12 21.8%	10 21.3%	5 18.5%	15 20.3%	1 25.0%
Results took too long	0 0.0%	2 12.5%	2 28.6%	0 0.0%	0 0.0%	4 7.3%	1 2.1%	4 14.8%	5 6.8%	0 0.0%
Citations inappropriate to my research	10 41.7%	8 50.0%	2 28.6%	3 75.0%	1 25.0%	24 43.6%	14 29.8%	8 29.6%	22 29.7%	0 0.0%
Other	8 33.3%	4 25.0%	2 28.6%	0 0.0%	1 25.0%	15 27.3%	22 46.8%	10 37.0%	32 43.2%	3 75.0%
Total	24 100.0%	16 100.0%	7 100.1%*	4 100.0%	4 100.0%	55 100.0%	47 100.0%	27 99.9%*	74 100.0%	4 100.0%

*This figure differs from 100% only because of rounding error.

remarked on the fact that a large percentage of materials listed as available at the library are, in fact, unavailable for one reason or another. Seven people had suggestions for improvements in this area such as stacking journals alphabetically and replacing stolen books and journals.

Thirty-eight of the respondents commented on the adequacy of the library collection. Twenty-eight respondents felt the library needs to increase library holdings in general areas. For example, over half of these respondents felt the library was deficient in the medical/nursing area. Ten had suggestions for increasing holdings in specific subjects (e.g., respiratory physiology).

Several of the respondents had comments about the library locations. Several respondents would like to see the science holdings consolidated into one library. Another seven respondents suggested that the library hours be extended (e.g., on holidays, 24 hours a day).

Twenty-four respondents commented on the photocopy machines. These comments concerned the lack of maintenance of the machines (n=9), the poor quality of machines (n=3), and the need for more machines (n=3). Suggestions for improvement included a system to enable users to charge copying to departmental accounts, to use designated copy machines as "express copiers", and to check out auditrons. Faculty and students were also concerned that small change was not always available because the small change machines were often out of order.

Eleven respondents had comments about computer searches that included problems in working out details with the library personnel (n=5) and incompleteness or inappropriateness of key words to the data base (n=3). Suggestions for improvement are to encourage use of this service and to install terminals in the smaller libraries (n=2). One person felt that computer searches were rather expensive.

Thirty-two respondents commented about library services such as problems in dealing with library personnel (n=4), problems with other services such as inter-library loans, the check-out process, card catalog, etc. (n=11), and difficulties in persuading libraries to purchase new books or journals (n=8). Nine respondents had suggestions for improvements that included allowing faculty to renew by phone, improving the quality of the facilities such as typewriters, and making the card catalog available on the computer.

Six respondents commented that the unavailability of materials at U.T. Austin libraries made it necessary for them to use alternative resources.

Summary and Conclusions

Most of the individuals who responded to the Science Libraries Survey were graduate students (doctoral and master's) and professors (full, associate, and assistant). Very few instructors, lecturers, and those who were not in any of the categories previously mentioned responded to the survey. The respondents represented every science and technology-related department in The University.

The results show that the libraries are used frequently (at least 1-3 times per week) by most users. The Engineering library is used most often; it is followed by the Perry-Castañeda library. The Engineering library was mentioned most frequently probably because a large percentage of both faculty (about 29%) and students (about 37%) came from engineering departments.

When asked whether they use the library themselves, send someone else, or both, most of the students said that they use the library themselves, while approximately half of the faculty indicated that they sometimes use the library themselves and sometimes send someone else. Most likely, this difference between graduate students and faculty is due to the fact that faculty more often have access to individuals whom they can send to the library.

For the faculty, the three primary reasons for using the library are, in order of preference: to obtain information for research, to check out books, and to examine new books or journals. For the students, the three primary reasons are, in order of preference: to check out books, to obtain information for research, and to photocopy.

The respondents were asked whether they needed certain library services within the last year. Less than one-fourth of either the faculty or the students needed NTIS reports. Almost one-half of the faculty and one-third of the students have had a computer-based literature search run within the last year. Of those who had a search run, the majority were satisfied with the results. A large percentage of those who were dissatisfied indicated they were dissatisfied because the citations were inappropriate to their research. In the last year, the majority of the students made no inter-library loan requests and did not recommend that the library buy any books or journals. However, half of the faculty made at least one inter-library loan request, and the majority of the faculty recommended that books or journals be bought by the library.

Over half of the faculty and almost two-thirds of the students obtain over 40% of the materials needed in their courses/research from the libraries. The faculty require students in their courses to use primarily indexes/abstracts to locate journal articles and library card catalogs. On the other hand, a large proportion of the graduate students do not require their students to use library reference materials because their courses do not involve library research. Regarding the research skills needed by their students, almost half of both the faculty and the graduate students would like the library to provide a demonstration of computerized literature searching. About one-third of the faculty and almost one-fifth

of the graduate students indicated that they did not need any help in teaching research skills to their students.

The respondents were asked whether they use or plan to use certain audiovisual media in connection with teaching. Both faculty and graduate students use or plan to use slides and computer programs more than other audiovisual media. The majority of the students but only two-fifths of the faculty expect the library to provide audiovisual media equipment and material for student use.

Appendix

SCIENCE LIBRARIES SURVEY

As part of an overall survey of the science libraries on campus, the General Libraries with the assistance of the Measurement and Evaluation Center is conducting a survey of faculty and graduate students in the colleges of Engineering, Natural Sciences, and Pharmacy and in the School of Nursing for information regarding the libraries. The information will be used to plan for future developments in the five science/technology branch libraries in particular. We would appreciate your taking a few minutes to answer the following questions and to return the completed form through campus mail by March 7, 1983.

Please respond to the questionnaire on the computer answer sheet provided using a No. 2 pencil to blacken the circle beneath the letter which corresponds to the answer you have chosen. Select only one option for each item.

1. What is your rank?

   A Professor
   B Associate Professor
   C Assistant Professor
   D Instructor
   E Lecturer
   F Graduate Student–Doctoral
   G Graduate Student–Master's
   H Other

The academic departments are listed alphabetically under items 2 through 4. Please blacken the appropriate circle under one of these items. If you are a faculty member, please indicate department of appointment.

2. A Aerospace Engineering & Engineering Mechanics
   B Architectural Engineering
   C Astronomy
   D Biomedical Engineering
   E Botany
   F Chemical Engineering
   G Chemistry
   H Civil Engineering
   I Computer Sciences
   J Electrical Engineering

3. A Geological Sciences
   B Home Economics
   C Marine Studies
   D Mathematics
   E Mechanical Engineering
   F Microbiology
   G Nursing
   H Petroleum Engineering
   I Pharmacy
   J Physics

4. A Zoology
   B Other

5. How frequently do you use a library or libraries at the University of Texas at Austin?

   A Daily
   B 4–6 times per week
   C 1–3 times per week
   D 1–2 times per month
   E Once a semester or less
   F Not necessary to my research

6. Which library or libraries do you use most often?

   A Architecture
   B Chemistry
   C Engineering
   D Geology
   E Perry-Castaneda
   F Physics-Mathematics-Astronomy
   G Science
   H Undergraduate
   I Other

7. Which library do you use next most often? (Use options above.)

8. Which library do you use third most often? (Use options above.)

Do you use the library to:

9.	Examine new books or journals	A Yes	B No
10.	Check out books	A Yes	B No
11.	Photocopy	A Yes	B No
12.	Use Computer-based information service	A Yes	B No
13.	Prepare teaching/class assignment	A Yes	B No
14.	Obtain information for research	A Yes	B No
15.	Use reserve materials	A Yes	B No
16.	Study own materials	A Yes	B No
17.	Consult the librarian	A Yes	B No
18.	Other	A Yes	B No

19. Have you needed any National Technical Information Service (NTIS) reports in the last year?

   A Yes B No

20. How do you use the library?

   A Use the library yourself
   B Send someone to the library
   C Both

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21. How much of the material needed in your research/coursework/teaching do you obtain from campus libraries?

   A 0–20% B 21–40% C 41–60% D 61–80% E 81–100%

22. How many books or journals have you recommended that the library buy in the last year?

A 0 B 1–3 C 4–6 D 7–10 E Over 10

23. How many inter-library loan requests have you made in the last year?

A 0 B 1–3 C 4–6 D 7–10 E Over 10

In the courses you teach, do you require students to use:

24.	Handbooks for specific factual data, formulas, etc.	A Yes B No
25.	Technical reports, standards, specifications, etc.	A Yes B No
26.	Computerized literature search services	A Yes B No
27.	Indexes/abstracts to locate journal articles	A Yes B No
28.	Encyclopedias and similar sources for background/historical data	A Yes B No
29.	Library card catalogs	A Yes B No
30.	None--courses do not involve library research	A Yes B No

Would you like the library to help you in teaching the research skills needed by your students by providing:

31.	An orientation tour of the library (during class time)	A Yes B No
32.	A presentation by a librarian on research techniques (during class time)	A Yes B No
33.	A demonstration of computerized literature searching	A Yes B No
34.	Consultation with a librarian on planning library research assignments	A Yes B No
35.	Other	A Yes B No
36.	No help required; I teach research skills as part of the course	A Yes B No

Do you use or plan to use any of the following audiovisual media in connection with teaching your classes?

37.	Audio tapes	A Yes B No
38.	Computer programs	A Yes B No
39.	Slides	A Yes B No
40.	Videotapes/videodiscs	A Yes B No
41.	Other	A Yes B No

42. Would you expect the library to provide appropriate media equipment and material for student use?

A Yes B No

43. Did you have a computer-based literature search run within the last year? A Yes B No

44. Were you satisfied with the results? A Yes B No

45. If no, was the reason A Cost B Results took too long C Citations inappropriate to my research D Other

If you wish to make additional comments, please include them below, and enclose this form with the machine scorable answer sheet. Please sign your name if you would like a librarian to contact you regarding library services.

THANK YOU FOR YOUR COOPERATION

PLEASE RETURN THE MACHINE SCORABLE ANSWER SHEET IN THE CAMPUS MAIL TO:

Library Evaluation Project
Measurement and Evaluation Center
BWY 301